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GB A 2110927

GB A 2110080

GB A 2107575

GB 1436631

GB 1291733

WO 8204228

WO A 8204018

US 4520982

Note: GB A 2113538 and WO 82/04228 are equivalent;

GB A 2110927 and WO A 82/04018 are equivalent;

(58) Field of search

A4L

Selected US specifications from IPC sub-class
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(54) Motor vehicle seat

(57) A seat frame, in particular for a motor vehicle seat, is provided with two webs (2, 3) and a sheet metal pan (1). The webs (2, 3) have the same shape and are arranged at the sheet metal pan (1) parallel to the axis, on opposing side walls (25). The sheet metal pan (1) stands almost perpendicularly on both webs (2, 3), and the latter are formed from a profiled workpiece having at least one longitudinal groove which runs parallel to the longitudinal axis of the seat.

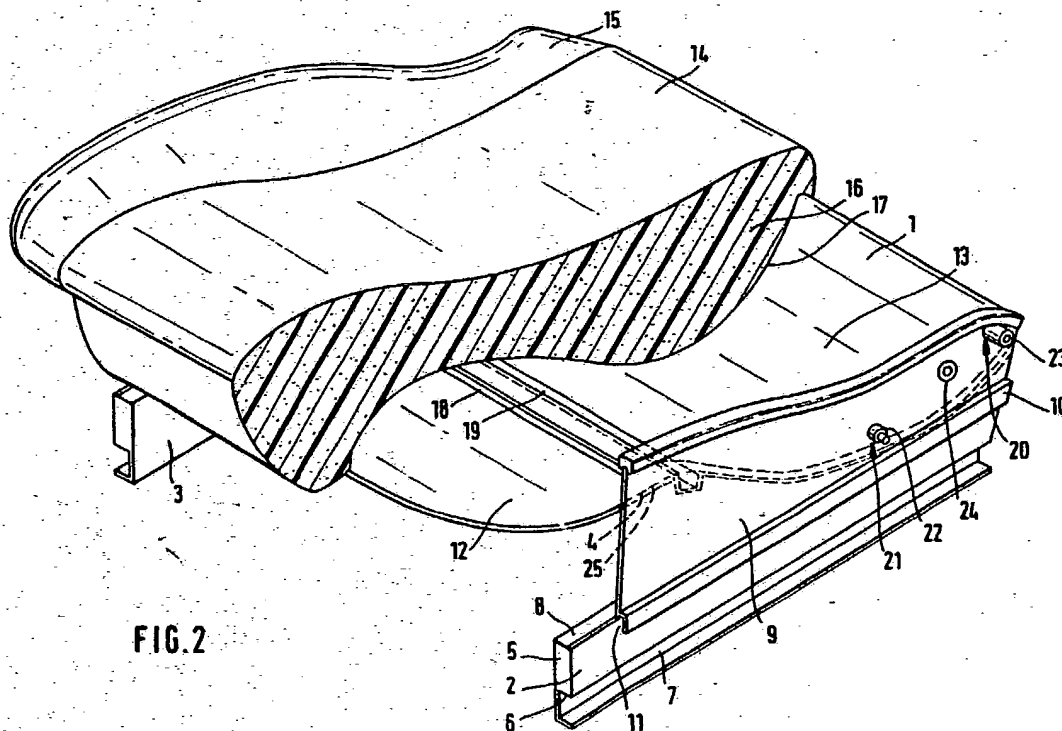
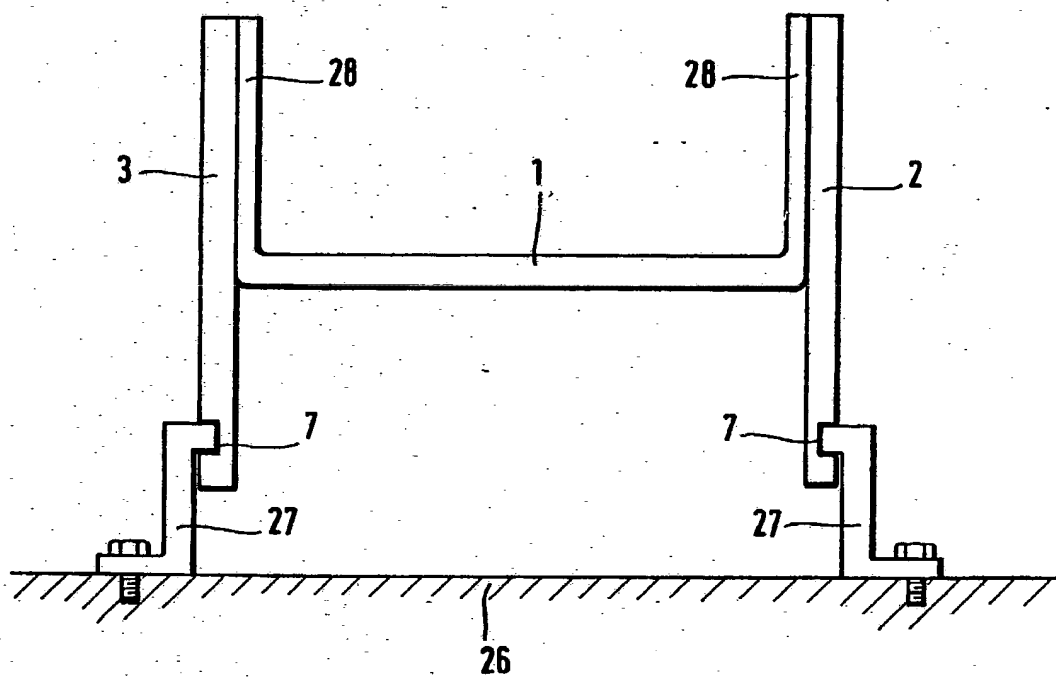


FIG. 2

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FIG. 1



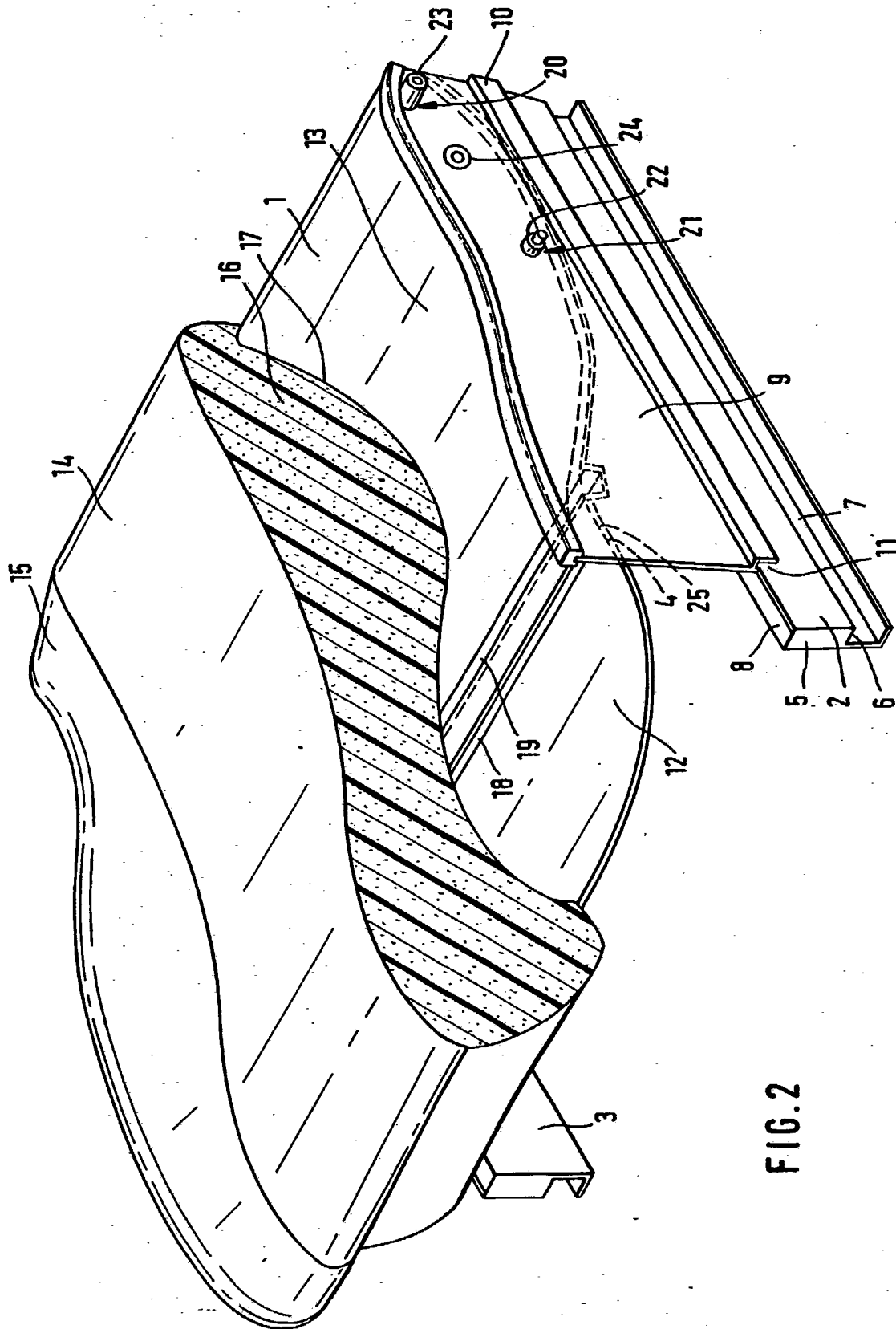


FIG. 2

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MOTOR VEHICLE SEAT

This invention relates to a seat frame for a motor vehicle seat.

10 A seat construction, in particular for a motor vehicle, is for instance described in the European Patent Application 0110144. This seat is mounted to a rigid seat pan. The seat is provided with an upholstery core. The latter comprises a rubber hair
15 block or a moulded polyurethane foam body. The upholstery core is air permeable. If it is made of an air-tight material, it is provided with vertical air holes. This known seat pan is, however, not provided with a holding and an adjusting device.

20 It is an object of the present invention to create a simple seat construction comprising a seat pan and standard parts for the adjusting device.

According to the invention there is provided a seat frame, in particular for a motor vehicle seat,
25 characterised in that the seat frame is provided with a seat pan formed from a sheet metal blank, which seat pan has side parts which are parallel to each other and whereon respective side pieces each holding the seat pan are fixedly arranged, each of
30 the side pieces being formed from a profiled workpiece and being provided with at least one longitudinal groove which runs parallel to the longitudinal axis of the seat.

Embodiments of the invention will now be
35 described by way of example with reference to the

accompanying drawings, in which

Figure 1 shows a diagram of a seat frame comprising a seat pan and two side pieces cooperating with guide rails attached to the vehicle bottom, and

Figure 2 shows an embodiment of a seat frame comprising a seat pan and two side pieces.

Figure 1 shows a seat construction comprising a seat pan 1 which is formed from a sheet metal blank and is hereinafter called a sheet metal pan. On parallel side parts 28 of the sheet metal pan 1, which are hereinafter called side walls, respective side pieces 2,3 each holding the seat pan 1 are fixedly arranged. Each side piece 2,3 is formed from a profiled workpiece and is provided with at least one longitudinal groove 7 which runs parallel to the longitudinal axis of the seat. The longitudinal groove 7 cooperates with a guide rail 27 attached to the vehicle bottom frame 28.

Figure 2 shows the seat construction, hereinafter called the seat frame, comprising the sheet metal pan 1 and the two side pieces 2,3, hereinafter called webs. The two webs 2,3 have the same shape and are arranged at the sheet metal pan 1 parallel to the axis, on opposing side walls 25. The sheet metal pan 1 stands almost vertically on both webs 2,3. The two webs 2,3 have an elongated shape and are longitudinally arranged on side walls 25 of the sheet metal pan 1. (Only one of the side walls 25 is visible in Figure 2). The web 2 is provided with a cuboid-shaped bracing 5 whose surface 6 forms a part of an integrated groove 7, hereinafter called a guide rail. The guide rail forms a sliding device for a second rail and/or rollers which are arranged in a stationary manner in

the motor vehicle. On another surface 8 of the web 2, a substantially flat web-shaped part 9, hereinafter called a board, is arranged. The sheet metal pan 1 and the board 9 are welded together at the welded joint 4. The board 9 confines the seat pan 1 laterally at least in part. A projection 10 integrated in the board 9 forms, together with the cuboid 5, a groove 11, hereinafter called a channel, which is provided for the fixing of upholstery. The channel 11 which is open towards the vehicle bottom 26 extends approximately parallel to the longitudinal groove 7. The sheet metal pan 1 is provided with a prominence 12 and a seat depression 13. The prominence 12 is arranged within the knee area of a driver, the seat depression 13 within the buttocks area of a driver. Upholstery 14, shown in section, is arranged on and/or in the sheet metal pan 1. The upholstery 14 is provided on one side, towards the web 3, with a raised cheek 15. Towards the opposite side, towards the web 2, the upholstery 14 is illustrated with a cut surface 16 and an edge 17. The welded joint 4 and the cut edge 17 reflect the S-shaped progression of the sheet metal pan 1 with the seat depression 13 and the prominence 12. Within the area of the prominence 12, ribs 18 and 19, hereinafter called beads, are arranged. In the event of a frontal crash of the vehicle, the beads 18 and 19 prevent the prominence 12 from being deformed and the driver from slipping through underneath the seat belt (submarining). Instead of the integrated beads 18, 19, a ribbed reinforcing sheet or a reinforcing sheet with beads within the area 12 can be arranged. The board 9 is furnished with two bores 20 and 21 protruding through which are pins 22 and 23. The pins 22 and 23 extend

almost perpendicularly to the plane of the side pieces 2,3 and serve as mounting points for a backrest. The pins 22 and 23 are arranged within recesses of the pan sheet 1 and are welded, soldered or riveted to the board 9 and the pan sheet 1. The pan sheet 1 serves to reinforce the fixation of the pins. A bore 24 serves to receive a screwed connection for a seat belt anchor. The web 2 with the cuboid 5, the groove 7, the board 9 and the channel 11 is made from one workpiece using the extrusion moulding method, that is, the cuboid 5, the groove 7, the board 9 and the channel 11 are shaped in a longish manner and are parallel to each other. Advantageously, aluminium alloys are used as a material. The seat frame described above is not only suitable for passenger cars but also for any other type of vehicle, such as, for instance, fork lifts, tractors or vans.

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CLAIMS:

1. A seat frame, in particular for a motor vehicle seat, characterised in that the seat frame is provided with a seat pan (1) formed from a sheet metal blank, which seat pan has side parts (25,28) which are parallel to each other and whereon respective side pieces (2,3) each holding the seat pan (1) are fixedly arranged, each of the side pieces (2,3) being formed from a profiled workpiece (2,3) and being provided with at least one longitudinal groove (7) which runs parallel to the longitudinal axis of the seat.
2. A seat frame according to claim 1, characterised in that the parallel longitudinal groove (7) cooperates with a guide rail (27) attached to the vehicle bottom (26).
3. A seat frame according to claim 1 or 2, characterised in that the profiled work piece (2,3) forming the side piece (2,3) is provided with a channel (11) extending approximately parallel to the longitudinal groove (7) and being open towards the vehicle bottom (26).
4. A seat frame according to any one of the preceding claims, characterised in that the profiled workpiece (2,3) forming the side piece (2,3) has a substantially flat web-shaped portion (9) which confines the seat pan (1) laterally at least in part.
5. A seat frame according to any one of the preceding claims, characterised in that pins (22,23) extending approximately perpendicularly to the plane of the side piece (2,3) are arranged at the web-shaped portion (9).
6. A seat frame according to claim 5, characterised in that the pins (20,22) are welded,

soldered or riveted to the seat pan (1).

7. A seat frame in particular for a motor vehicle seat, substantially as described with reference to the accompanying drawings.

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